

We claim:

1. In a process for the manufacture of nitrile monomer selected from the group consisting of acrylonitrile and methacrylonitrile, said process comprising contacting a gaseous effluent comprising nitrile monomer from an ammoxidation reactor with an aqueous quench liquid in a first column; contacting the gaseous quench effluent from said first column with water in a second column, thereby forming an aqueous solution comprising nitrile monomer and coproducts; and subjecting said aqueous solution to a water extractive distillation in a recovery distillation column employing solvent water and collecting said nitrile monomer together with water in an overhead decanter wherein the pH of the contents of said distillation column is maintained in the range of from about 5.5 to about 7.5 by adding an alkaline compound, the improvement wherein said alkaline compound is selected from the group consisting of ammonium carbonate, ammonium bicarbonate, ammonium carbamate, alkylene diamines, and mixtures thereof.

2. In the process of Claim 1, the improvement wherein said pH is maintained in the range of from about 6 to about 7.

3. In the process of Claim 1, the improvement wherein said alkaline compound is ammonium carbonate.

4. In the process of Claim 1, the improvement wherein said alkaline compound is a mixture comprising ammonium bicarbonate and ammonium carbamate.

5. In the process of Claim 2, the improvement wherein said ammonium carbonate is generated in situ by adding ammonia and carbon dioxide to said solvent water.

6. In the process of Claim 1, the improvement wherein said alkaline compound is an alkylene diamine.

7. In the process of Claim 1, the improvement wherein said alkaline compound is an alkylene diamine selected from the group consisting of ethylene diamine and an N,N,N',N'-tetraalkyl ethylene diamine.